



CX502

OSCILLATING VERTICAL SPINDLE SANDER

User Manual



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GENERAL SAFETY INSTRUCTIONS FOR MACHINES

Extreme caution should be used when operating all power tools. Know your power tool, be familiar with its operation, read through the owner's manual and practice safe usage procedures at all times.

- ❖ **ALWAYS** read and understand the user manual before operating the machine.
- ❖ **CONNECT** your machine **ONLY** to the matched and specific power source.
- ❖ **ALWAYS** wear safety glasses respirators, hearing protection and safety shoes, when operating your machine.
- ❖ **DO NOT** wears loose clothing or jewelry when operating your machine. Wear protective hair covering.
- ❖ **A SAFE ENVIRONMENT** is important. Keep the area free of dust, dirt and other debris in the immediate vicinity of your machine.
- ❖ **BE ALERT! DO NOT** use prescription or other drugs that may affect your ability or judgment to safely use your machine.
- ❖ **DISCONNECT** the power source when changing drill bits, hollow chisels, router bits, shaper heads, blades, knives or making other adjustments or repairs.
- ❖ **NEVER** leave a tool unattended while it is in operation.
- ❖ **NEVER** allow unsupervised or untrained person to operate the machine
- ❖ **NEVER** reach over the table when the tool is in operation.
- ❖ **ALWAYS** keep blades, knives and bits sharpened and properly aligned.
- ❖ **ALL OPERATIONS MUST BE** performed with the guards in place to ensure safety.
- ❖ **ALWAYS** use push sticks and feather boards to safely feed your work through the machine.
- ❖ **ALWAYS** make sure that any tools used for adjustments are removed before operating the machine.
- ❖ **ALWAYS** keep bystanders safely away while the machine is in operation.
- ❖ **NEVER** attempt to remove jammed cutoff pieces until the blade has come to a full stop.

CX502 OSCILLATING VERTICAL SPINDLE SANDER

SPECIFIC SAFETY INSTRUCTIONS

- ❖ **MAKE SURE** the sander is connected to the matched and specific power source instructed in the manual.
- ❖ **ALL THE GUARDS** must be in place while operating the sander to ensure safety.
- ❖ **MAKE SURE** before making any adjustments, the switch is in the “OFF” position and the cord is un-plugged from the power source.
- ❖ **DO NOT** wear loose clothing while operating this sander.
- ❖ **KEEP YOUR WORK AREA CLEAN.** Cluttered areas and workbenches increase the chance of accident.
- ❖ **KEEP CHILDREN AWAY.** All visitors should be kept at a safe distance from the work area.
- ❖ **NEVER LEAVE** the sander unattended while it is running.
- ❖ **HOLD** the work-piece firmly against the table when sanding.
- ❖ **DO NOT** force the sander. It will do the job better and will be safer at the operating rate for which it is designed.
- ❖ **ALWAYS** wear dust mask and safety glasses while operating the sander. The tiny pieces of dust produced by the sander can cause serious health problems.
- ❖ **ALWAYS** inspect stock for staples, nails knots or any other foreign material before sanding.
- ❖ **ALWAYS** operate the sander in a well ventilated area and use a dust collection system for dust removal whenever possible.
- ❖ **MAINTAIN AND SERVICE** your sander regularly as instructed in the user manual.
- ❖ **MAKE SURE** you have read and understood all the safety instructions in the manual and you are familiar with your CX502 sander, before operating it. If you fail to do so, serious injury could occur.

WARNING

The safety instructions given above can not be complete because the environment in every shop is different. Always consider safety first as it applies to your individual working conditions.



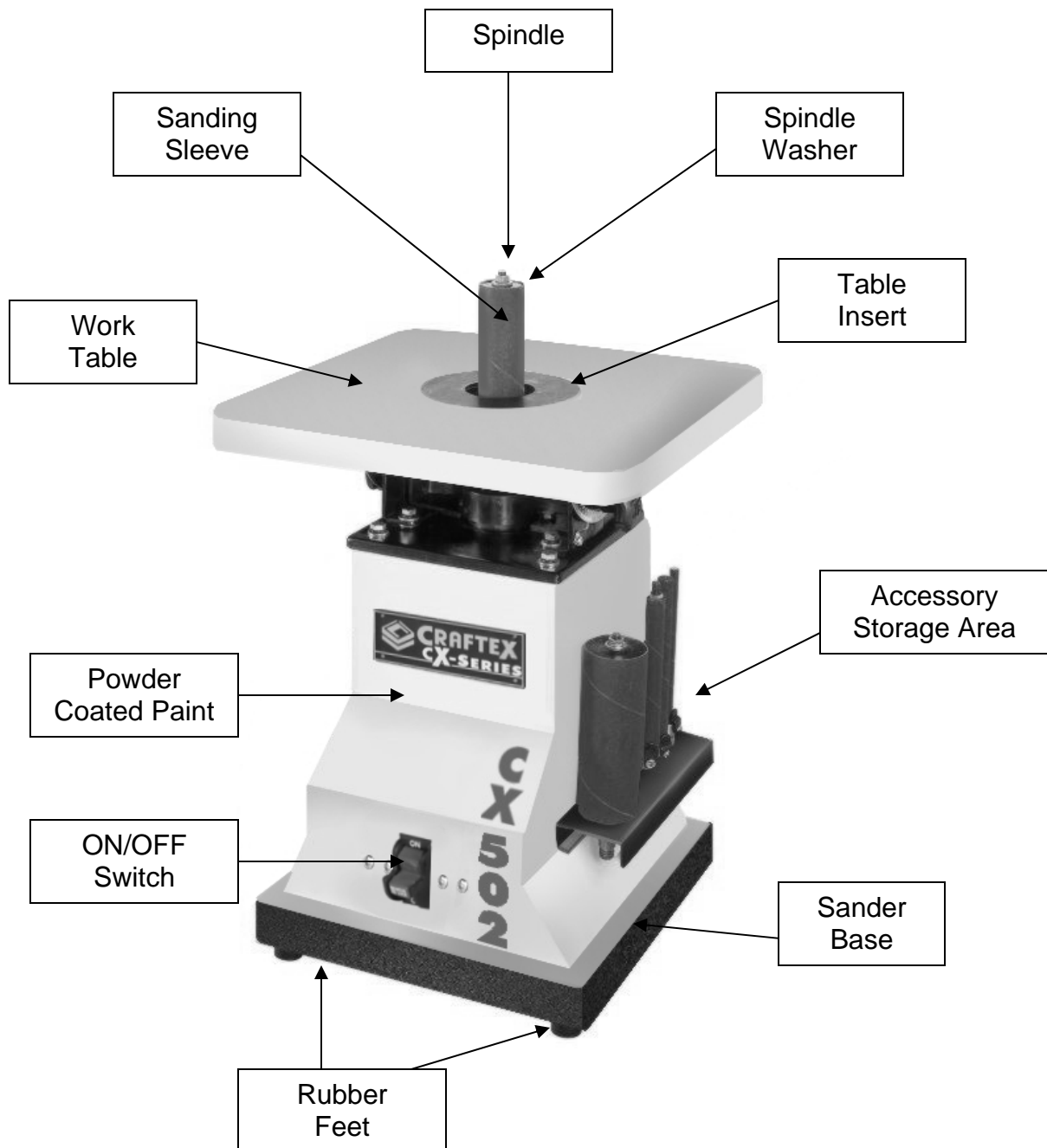
CX502 SANDER **FEATURES**

MODEL CX502 – OSCILLATING VERTICAL SPINDLE SANDER

As part of the growing line of Craftex woodworking equipment, we are proud to offer the CX502, An Oscillating Vertical Spindle Sander. The Craftex name guarantees Craft Excellence. By following the instructions and procedures laid out in this user manual, you will receive years of excellent service and satisfaction. The CX502 is a professional tool and like all power tools, proper care and safety procedures should be adhered to.

- ✧ Motor 1/2-HP, 110-Volts, Single Phase, 60-Hz
- ✧ Spindle Diameters 1/4", 1/2", 5/8", 1-1/2" and 2"
- ✧ Spindle Speed 1720 RPM
- ✧ Oscillation Per Minute..... 29 SPM
- ✧ Oscillation Stroke..... 1" (24 mm)
- ✧ Sanding Sleeve Length 5-1/2" (141mm)
- ✧ Max Work-piece Height 3" (80 mm)
- ✧ Table Size..... 14-1/2" x 14-1/2" (370 mm x 370 mm)
- ✧ Table Tilt..... 0 ~ 45-degree
- ✧ Dust Port Diameter 2" (50.8 mm)
- ✧ Overall Dimensions 14-1/2" x 14-1/2" x 18-7/8" (370 mm x 370 mm x 480 mm)
- ✧ Net Weight..... 15.8 lbs (35 Kg)
- ✧ Warranty3 Years

CX502 OSCILLATING VERTICAL SPINDLE SANDER PHYSICAL FEATURES



PROPER GROUNDING

Grounding provides a path of least resistance for electric current to reduce the risk of electric shock.

CX502 is for use on a normal 110 volt circuit. Make sure that the machine is connected to an outlet having the same configuration as the plug. If an adaptor plug is used, it must be attached to the metal screw of the receptacle. To prevent electrical hazards, have a qualified electrician ensure that the line is properly wired.

The sander should be wired with a plug having 3 prongs to fit a 3 prong grounding receptacle as shown in figure-1. Do not remove the grounding prong to fit it into a 2 pronged outlet.

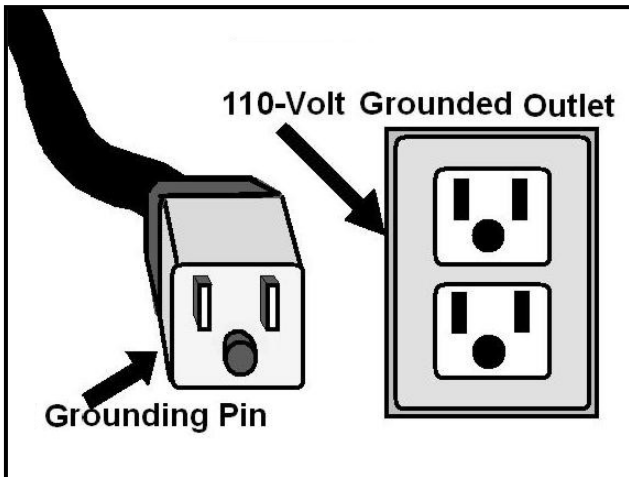


Figure-1 110-Volts outlet for CX502

WARNING

Improper connection of the equipment-grounding conductor can result in a risk of electric shock. Check with a qualified electrician if you are in doubt as to whether the outlet is properly grounded.

It is strongly recommended not to use extension cords with your CX502. Always try to position your machine close to the power source so that you do not need to use extension cords.

In case if you really find it necessary to use an extension cord, make sure the extension cord does not exceed 50-feet in length and the cord is 14-gauge to prevent motor damage.

UNPACKING

To ensure safe transportation this machine is properly packaged and shipped completely in a box. When unpacking, carefully inspect the box and ensure that nothing has been damaged during transit. Open the box and check that the machine and the parts are in good condition.

ON/OFF SWITCH

The CX502 is equipped with an ON/OFF switch, located on the front side of the machine which starts and stops the sander. The switch has a locking key feature which, prevents from unauthorized use. When the key is removed, the ON button on the switch does not work.

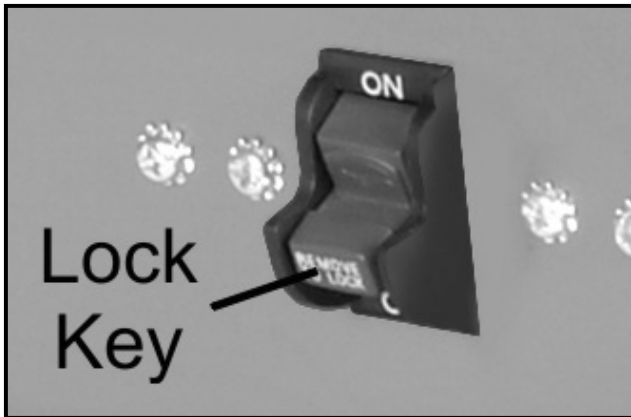


Figure-2 ON/OFF switch

DUST COLLECTION

The CX502 is equipped with a 2" diameter dust port for optimum dust removal.

When connecting to a dust collector, use a proper sized hose and make sure all the connections are sealed tightly.

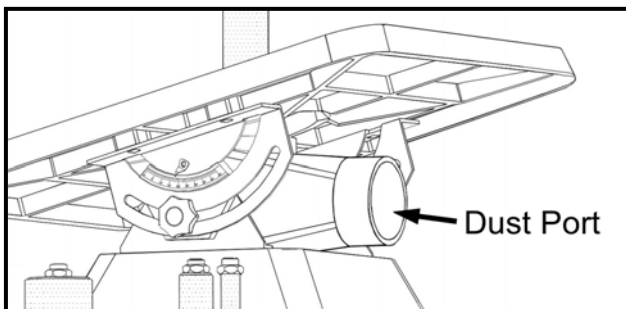


Figure-3 CX502 dust port

WARNING

The fine dust produced by the sander can go inside your lungs and cause serious respiratory problems. Make sure to wear a dust mask and the machine is connected to a proper dust collection system while operation.

SPINDLE DRUM

The CX502 comes with five spindle drums and five matching sanding sleeves. To install the drum spindle make sure the switch is in the OFF position and the cord is disconnected from the power source.

Select the proper sized spindle drum and install the desired rubber drum onto the spindle with the matching sanding sleeve.

Install the washer and then finger tighten the nut onto the spindle. Use an open-end wrench holding the spindle with its flat surface from the bottom of the table and at the same time use another open-end wrench to tighten the hex nut onto the spindle from the top.

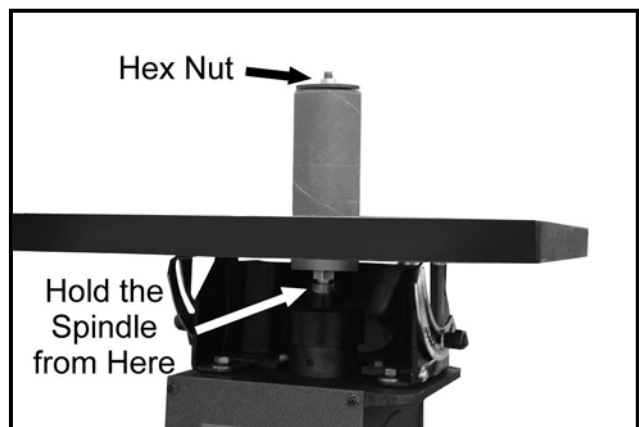


Figure-4 Installing the sanding drum and sanding sleeve

SELECTING PROPER SIZE DRUM & TABLE INSERT

The machine comes with five spindle drums; 1/4", 1/2", 5/8", 1-1/2" and 2".

Drum Diameter	Table Insert
1/4"	#1, #2
1/2"	#1, #2
5/8"	#1, #2
1-1/2"	#3, #4
2"	#3, #4

Figure-5 Table inserts used with rubber drums

TILTING THE TABLE

To tilt the table, make sure the switch is in the OFF position and the cord is disconnected from the power source.

Loosen the two table lock knobs located under the work table on both sides. Tilt the table forward to the desired angle according to the tilt scale located on the right side of the machine under the table.

Once the table is at the desired angle, tighten the two table lock knobs securely to secure the table in position.

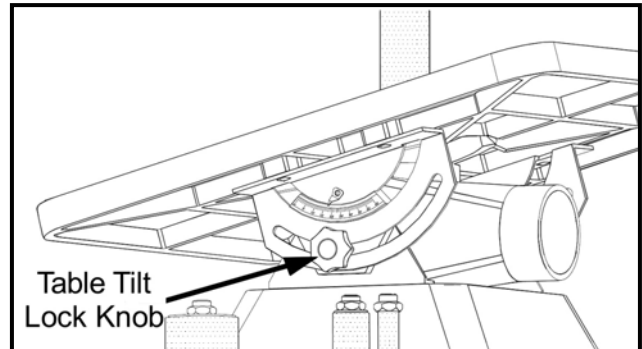


Figure-6 Tilting the table

SANDING TIPS

Always select the spindle that is smaller than the curve to be sanded.

Always use a table insert that is closest to the spindle but not touching it.

When table is set a 90° angle, sanding may be done from any corner on the table around the spindle.

Always lock the table tilt lock knobs when setting at an angle to prevent the table from moving while operation.

Always wear safety glasses for the protection of your eyes and a dust mask to prevent the fine dust particles going into your lungs while sanding.

Always hold the work-piece with both hands on the table against the sanding sleeve.

Do not force the work-piece against the sanding sleeve. If the work-piece is forced against the sanding sleeve, it will either damage the work-piece or the sleeve.

MAINTENANCE

During the life of your tool, you will need to practice some regular maintenance to keep your sander in peak performance condition.

WARNING

When installing / removing and servicing any part of the machine, make sure the power switch is in the OFF position and the cord is disconnected from the power source. Failure to do so may result in serious personal injury.

Before using the machine, make sure to inspect the sander for the following:

- ❖ Loose bolts, screws and nuts
- ❖ Sanding drum and sleeve is installed properly
- ❖ Worn or damaged cord
- ❖ Damaged sanding sleeve
- ❖ Or any other unsafe condition

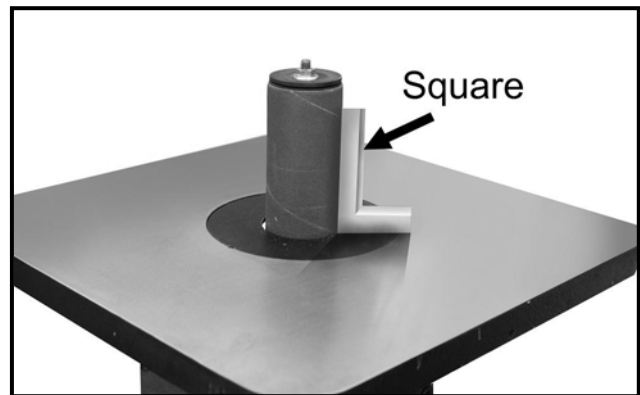
Make sure to turn the machine OFF after use and clean all the sawdust from the work table and the surrounding areas. Clean the work table using a piece of cloth and make sure there is no moisture on it to prevent from rusting.

SQUARING TABLE TO THE SPINDLE

The table is squared with the spindle at the factory, however after a long period of time the table might come out of alignment with the spindle.

To check if the spindle is square to the table:

Make sure the switch is in the OFF position and the cord is disconnected from the power source.



Place a square on the work table as shown in figure-7.

If the square is touching the spindle drum with its full length and it is sitting on the table properly, then the table is square to the spindle.

If the square is not touching the spindle drum with its full length, it means the spindle and table are not square to each other and need to be adjusted.

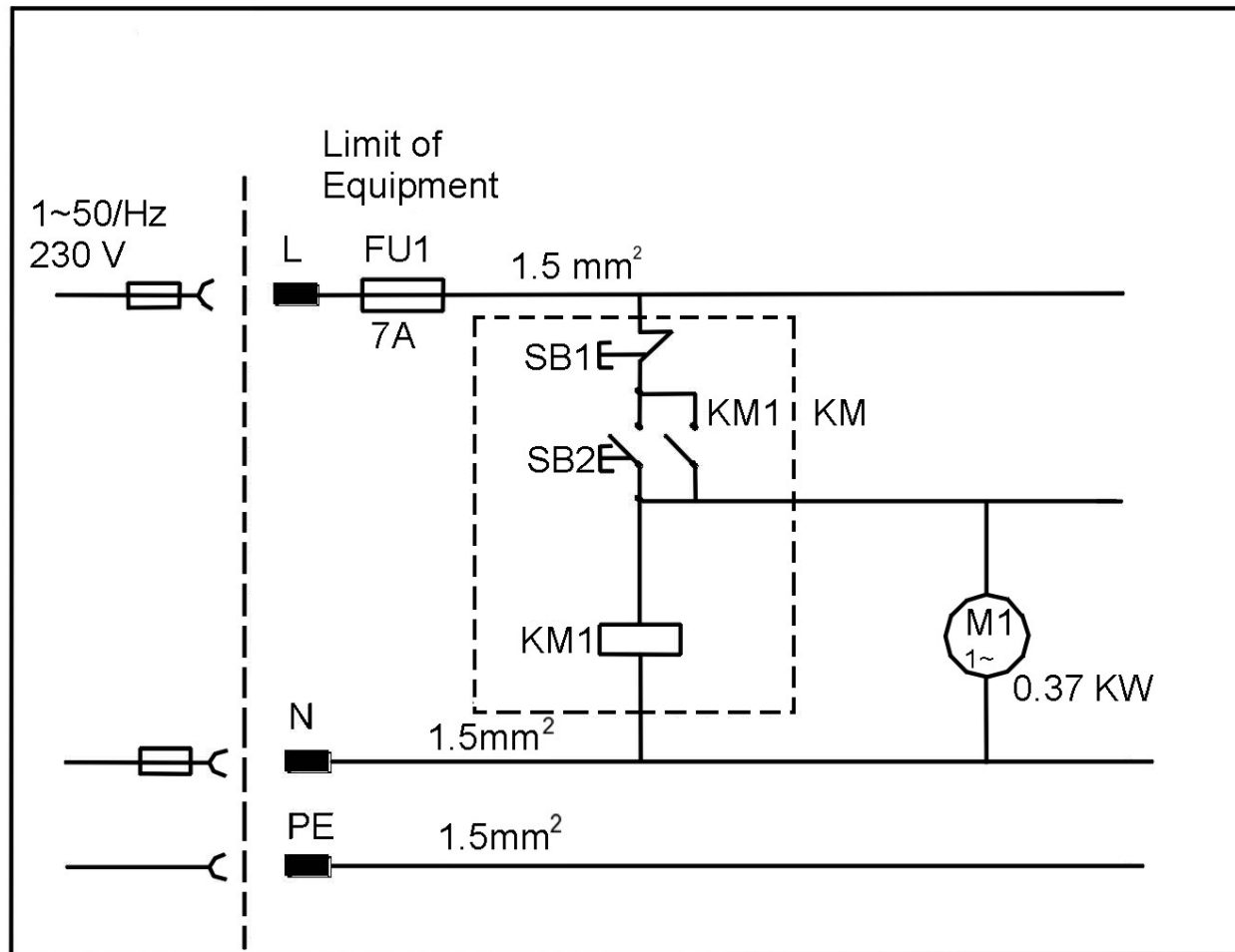
Open the table tilt locks and adjust the table so that the square placed on the table is sitting on the table and touching the spindle drum with its full length.

Once the table is square with the spindle, loosen the screw on the angle indicator on the tilt scale and make it "0". Re-tighten the screw and secure the indicator in position.

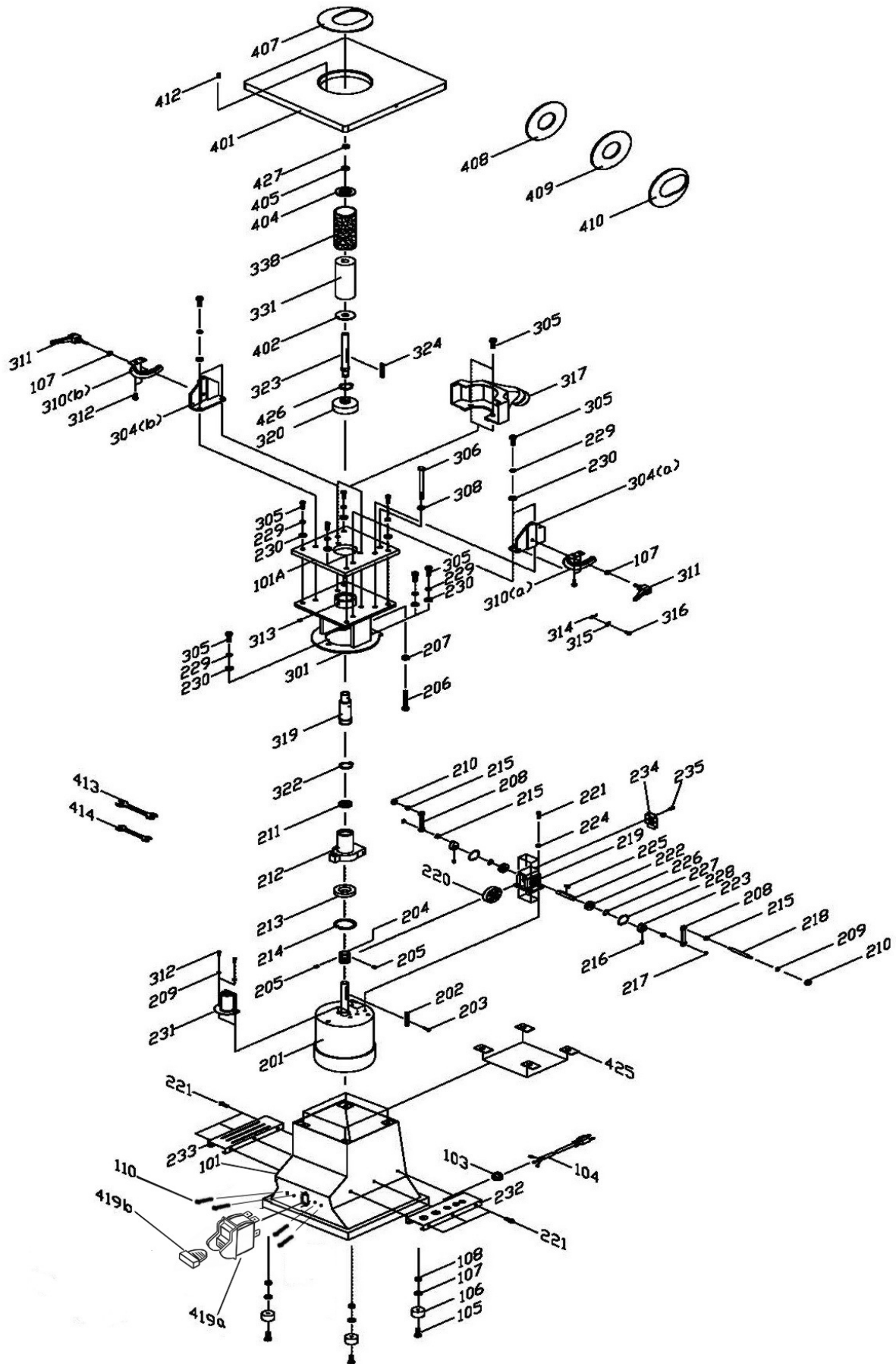
TROUBLESHOOTING

PROBLEMS	CAUSES	SOLUTION
Motor does not run when power switch is turned "ON".	<ol style="list-style-type: none"> 1. Switch is burned out. 2. Connection wire is loose or damaged. 	<ol style="list-style-type: none"> 1. Replace the switch. 2. Tighten or replace the wire.
Motor does not run at full speed.	<ol style="list-style-type: none"> 1. Power voltage is too low. 2. Motor is damaged. 	<ol style="list-style-type: none"> 1. Test voltage. 2. Check and repair motor.
Motor does not reach full power.	<ol style="list-style-type: none"> 1. Incorrect power wiring. 2. Overload. 	<ol style="list-style-type: none"> 1. Replace with the correct size power wiring. 2. Reduce sanding load.
Motor overheating	<ol style="list-style-type: none"> 1. Motor is dirty. 2. Motor is damaged. 	<ol style="list-style-type: none"> 1. Clean motor. 2. Check and repair motor.
Excessive machine vibration	Machine is incorrectly leveled.	Adjust machine leveling
Mark on workpiece	<ol style="list-style-type: none"> 1. Sanding drum is damaged. 2. Sanding cloth on drum is worn in some areas. 	<ol style="list-style-type: none"> 1. Replace the sanding drum. 2. Replace sanding cloth
Sanding drum turns in wrong direction	Wrong phase or voltage	Make sure the phase and voltage comply with machine requirement.
Burns on workpiece	Wrong abrasive grit on sanding cloth	Use coarser grit to remove more material from workpiece.

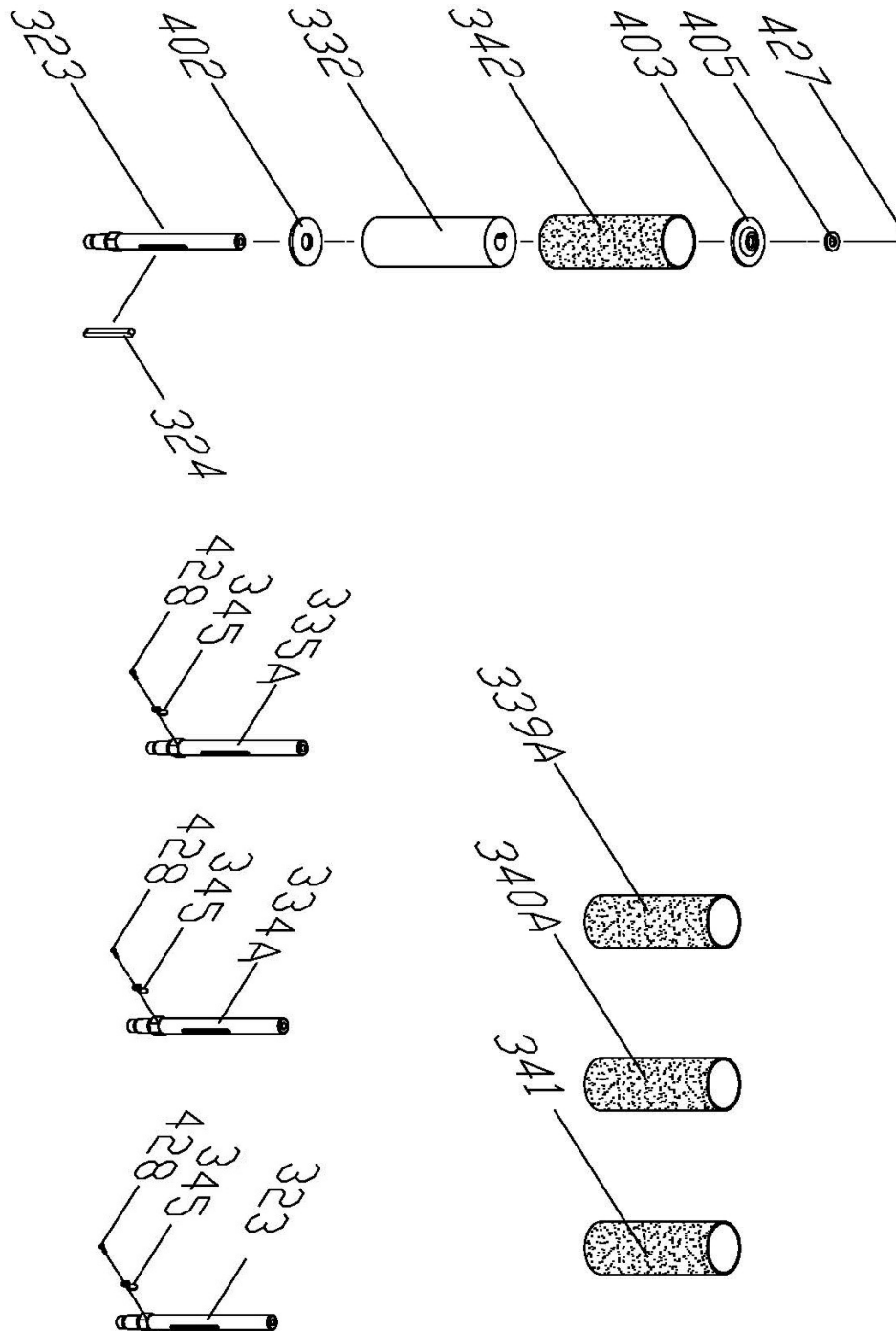
WIRING DIAGRAM



CX502 PARTS BREAKDOWN



CX502 PARTS BREAKDOWN



CX502 PARTS LIST

PART#	DESCRIPTION
101	BASE
101A	TOP PLATE
103	STRAIN RELIEF
104	POWER CORD
105	SCREW RND HD M6-1.0 X 25
106	RUBBER FEET
107	WASHER 1/4
108	NUT - HEX M6-1.0
109	WASHER - LOCK M4
110	SCREW RD HD M4-0.7 X 10
CX502MOT	MOTOR 1/2 HP
202	KEY 6 X 6 X 50
203	SCREW FLAT HD M4- 0.7 X 15
204	WORM SHAFT
205	SCREW SET SOC M6-1.0 X 10
206	TRANSMISSION ROD
207	NUT HEX M8-1.25
208	CONNECTING ROD
209	WASHER FLAT 3/16 X 12
210	NUT - LOCK M5-0.8
211	BEARING 6804ZZ
212	TRANSMISSION
213	BEARING 6006ZZ
214	C RING RTW-55
215	CONNECTION ROD NUT
216	SCREW - SET SOC HD M5-0.8 X 6
217	C-RING ETW-4
218	CONNECTING SPINDLE
219	WHEEL SEAT
220	WHEEL
221	SCREW-CAP SOC HD M6-1.0X15
222	WHEEL ARBOR
223	ARBOR COVER
224	WASHER - LOCK 1/4
225	KEY 4 X 4 X 15
226	BEARING 6001ZZ
227	C- RING STW-12
228	C- RING R-28
229	WASHER - LOCK 5/16
230	WASHER - FLAT 5/16
231	OIL CAP
232	RIGHT SIDE SHELF
233	LEFT SIDE SHELF

301	MAIN CASTING
304-A	BRACKET RIGHT
304-B	BRACKET LEFT
305	BOLT HEX HD M8-1.25 X 16
306	HEX BOLT M8-1.25 X 110
308	NUT - HEX M8-1.25
310-a	GRADUATION DIAL -RIGHT
310-A	GRADUATION DIAL - LEFT
311	LEVER M5-0.8 X 16
312	SCREW - FLAT HEAD M5-0.8 X 15
313	SCREW SET SOC HD M6-1.0 X 6
314	WIDTH POINTER
315	WASHER STAR 3/16
316	SCREW - RD HD M5-0.8 X 10
317	DUST COLLECTION COVER
319	SPINDLE
320	COVER
322	C RING STW-28
323	SPINDLE 5/8
324	KEY 5 X 5 X 50
331	DRUM 2"
332	DRUM 1 1/2"
334-A	SPINDLE 1/2"
335-A	SPINDLE 1/4"
338	SANDING CLOTH 2" 100G
339-A	SANDING CLOTH 1/4" 100G
340-A	SANDING CLOTH 1/2"
341	SANDING CLOTH 5/8
342	SANDING CLOTH 1 1/2"
345	PLATE 1/4"
401	WORKING TABLE
402	LOWER FOLLOWER PLATE
403	UPPER FOLLOWER PLATE 1 1/2"
404	UPPER FOLLOWER PLATE 2"
405	WASHER 5/16
406	NUT HEX 5/16-18
407	TABLE INSERT OVAL 2"
408	TABLE INSERT ROUND 2"
409	TABLE INSERT ROUND 3/4"
410	TABLE INSERT OVAL 3/4"
412	PIN - SPRING Φ 12 X 12
417	I.D. LABEL
418	OPERATION MANUAL
419-A	SWITCH
419-B	SWITCH BOX
426	RING
427	NUT HEX HD M8-1.25 L.H.
428	SCREW PAN HD PHILLIPS M5-0.8 X 8



WARRANTY

CRAFTEX 3 YEARS LIMITED WARRANTY

Craftex warrants every product to be free from defects in materials and agrees to correct such defects where applicable. This warranty covers **three years** for parts and 90 days for labor (unless specified otherwise), to the original purchaser from the date of purchase but does not apply to malfunctions arising directly or indirectly from misuse, abuse, improper installation or assembly, negligence, accidents, repairs or alterations or lack of maintenance.

Proof of purchase is necessary.

All warranty claims are subject to inspection of such products or part thereof and Craftex reserves the right to inspect any returned item before a refund or replacement may be issued.

This warranty shall not apply to consumable products such as blades, bits, belts, cutters, chisels, punches etceteras.

Craftex shall in no event be liable for injuries, accidental or otherwise, death to persons or damage to property or for incidental contingent, special or consequential damages arising from the use of our products.

RETURNS, REPAIRS AND REPLACEMENTS

To return, repair, or replace a Craftex product, you must visit the appropriate Busy Bee Tools showroom or call 1-800-461-BUSY. Craftex is a brand of equipment that is exclusive to Busy Bee Tools.

For replacement parts directly from Busy Bee Tools, for this machine, please call 1-800-461-BUSY (2879), and have your credit card and part number handy.

- All returned merchandise will be subject to a minimum charge of 15% for re-stocking and handling with the following qualifications.
- Returns must be pre-authorized by us in writing.
- We do not accept *collect* shipments.
- Items returned for warranty purposes must be insured and shipped pre-paid to the nearest warehouse
- Returns must be accompanied with a copy of your original invoice as proof of purchase. Returns must be in an un-used condition and shipped in their original packaging a letter explaining your reason for the return. Incurred shipping and handling charges are not refundable.
- Busy Bee will repair or replace the item at our discretion and subject to our inspection.
- Repaired or replaced items will be returned to you pre-paid by our choice of carriers.
- Busy Bee reserves the right to refuse reimbursement or repairs or replacement if a third party without our prior authorization has carried out repairs to the item.
- Repairs made by Busy Bee are warranted for 30 days on parts and labour.
- Any unforeseen repair charges will be reported to you for acceptance prior to making the repairs.
- The Busy Bee Parts & Service Departments are fully equipped to do repairs on all products purchased from us with the exception of some products that require the return to their authorized repair depots. A Busy Bee representative will provide you with the necessary information to have this done.
- For faster service it is advisable to contact the nearest Busy Bee location for parts availability prior to bringing your product in for repairs.